

SEQUENCE LISTING

<110> Lichenstein, Henri
Shimkets, Richard A.
Herrmann, John
Boldog, Ferenc

<120> Growth Factor Polypeptides and Nucleic Acids Encoding
Same

<130> 15966-577 (Cura-77)

<140> filed herewith

<141> 2000-09-12

<150> USSN 60/158,083

<151> 1999-10-07

<150> USSN 60/186,707

<151> 2000-03-03

<150> USSN 60/188,250

<151> 2000-03-10

<150> USSN 60/159,231

<151> 1999-10-13

<150> USSN 60/174,485

<151> 2000-01-04

<150> USSN 60/223,879

<151> 2000-08-08

<160> 24

<170> PatentIn Ver. 2.0

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gtcccgggag cagaaccggg ctttttcttg gagcgacgct gtctctagtc gctgatccca 180

a atg cac cgg ctc atc ttt gtc tac act cta atc tgc gca aac ttt tgc 229

Met His Arg Leu Ile Phe Val Tyr Thr Leu Ile Cys Ala Asn Phe Cys

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agc tgt cgg gac act tct gca acc ccg cag agc gca tcc atc aaa gct 277

Ser Cys Arg Asp Thr Ser Ala Thr Pro Gln Ser Ala Ser Ile Lys Ala

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ttg cgc aac gcc aac ctc agg cga gat gag agc aat cac ctc aca gac 325

Leu Arg Asn Ala Asn Leu Arg Arg Asp Glu Ser Asn His Leu Thr Asp

35 40 45

ttg tac cga aga gat gag acc atc cag gtg aaa gga aac ggc tac gtg 373

Leu Tyr Arg Arg Asp Glu Thr Ile Gln Val Lys Gly Asn Gly Tyr Val

50 55 60

cag agt cct aga ttc ccg aac agc tac ccc agg aac ctg ctc ctg aca 421

Gln Ser Pro Arg Phe Pro Asn Ser Tyr Pro Arg Asn Leu Leu Leu Thr

65 70 75 80

tgg cgg ctt cac tct cag gag aat aca cgg ata cag cta gtg ttt gac 469

Trp Arg Leu His Ser Gln Glu Asn Thr Arg Ile Gln Leu Val Phe Asp

85 90 95

aat cag ttt gga tta gag gaa gca gaa aat gat atc tgt agg tat gat 517

Asn Gln Phe Gly Leu Glu Glu Ala Glu Asn Asp Ile Cys Arg Tyr Asp

100 105 110

ttt gtg gaa gtt gaa gat ata tcc gaa acc agt acc att att aga gga 565

Phe Val Glu Val Glu Asp Ile Ser Glu Thr Ser Thr Ile Ile Arg Gly

115 120 125

cga tgg tgt gga cac aag gaa gtt cct cca agg ata aaa tca aga acg 613

Arg Trp Cys Gly His Lys Glu Val Pro Pro Arg Ile Lys Ser Arg Thr

130 135 140

aac caa att aaa atc aca ttc aag tcc gat gac tac ttt gtg gct aaa 661

Asn Gln Ile Lys Ile Thr Phe Lys Ser Asp Asp Tyr Phe Val Ala Lys

145 150 155 160

cct gga ttc aag att tat tat tct ttg ctg gaa gat ttc caa ccc gca 709

Pro Gly Phe Lys Ile Tyr Tyr Ser Leu Leu Glu Asp Phe Gln Pro Ala

165 170 175

Asn Gln Phe Gly Leu Glu Glu Ala Glu Asn Asp Ile Cys Arg Tyr Asp
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Phe Val Glu Val Glu Asp Ile Ser Glu Thr Ser Thr Ile Ile Arg Gly
 115 120 125

Arg Trp Cys Gly His Lys Glu Val Pro Pro Arg Ile Lys Ser Arg Thr
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Asn Gln Ile Lys Ile Thr Phe Lys Ser Asp Asp Tyr Phe Val Ala Lys
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Pro Gly Phe Lys Ile Tyr Tyr Ser Leu Leu Glu Asp Phe Gln Pro Ala
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Ala Ala Ser Glu Thr Asn Trp Glu Ser Val Thr Ser Ser Ile Ser Gly
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Val Ser Tyr Asn Ser Pro Ser Val Thr Asp Pro Thr Leu Ile Ala Asp
 195 200 205

Ala Leu Asp Lys Lys Ile Ala Glu Phe Asp Thr Val Glu Asp Leu Leu
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Lys Tyr Phe Asn Pro Glu Ser Trp Gln Glu Asp Leu Glu Asn [Met Tyr
 225 230 235 240

Leu Asp Thr Pro Arg Tyr Arg Gly Arg Ser Tyr His Asp Arg Lys Ser
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Lys Val Asp Leu Asp Arg Leu Asn Asp Asp Ala Lys Arg Tyr Ser Cys
 260 265 270

Thr Pro Arg Asn Tyr Ser Val Asn Ile Arg Glu Glu Leu Lys Leu Ala
 275 280 285

Asn Val Val Phe Phe Pro Arg Cys Leu Leu Val Gln Arg Cys Gly Gly
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Asn Cys Gly Cys Gly Thr Val Asn Trp Arg Ser Cys Thr Cys Asn Ser
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Gly Lys Thr Val Lys Lys Tyr His Glu Val Leu Gln Phe Glu Pro Gly
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002160" E329960

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gga gga aat tgt ggc tgt gga act gtc aac tgg agg tcc tgc aca tgc 779
 Gly Gly Asn Cys Gly Cys Gly Thr Val Asn Trp Arg Ser Cys Thr Cys
 65 70 75 80

aat tca ggg aaa acc gtg aaa aag tat cat gag gta tta cag ttt gag 827
 Asn Ser Gly Lys Thr Val Lys Lys Tyr His Glu Val Leu Gln Phe Glu
 85 90 95

cct ggc cac atc aag agg agg ggt aga gct aag acc atg gct cta gtt 875
 Pro Gly His Ile Lys Arg Arg Gly Arg Ala Lys Thr Met Ala Leu Val
 100 105 110

gac atc cag ttg gat cac cat gaa cga tgt gat tgt atc tgc agc tca 923
 Asp Ile Gln Leu Asp His His Glu Arg Cys Asp Cys Ile Cys Ser Ser
 115 120 125

aga cca cct cga taagagaatg tgcacatcct tacattaagc ctgaaagaac 975
 Arg Pro Pro Arg
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ctttagttta aggagggtga gataagagac ccttttcta ccagcaacca aacttactac 1035

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Ser Cys Thr Pro Arg Asn Tyr Ser Val Asn Ile Arg Glu Glu Leu Lys
35 40 45

Leu Ala Asn Val Val Phe Phe Pro Arg Cys Leu Leu Val Gln Arg Cys
50 55 60

Gly Gly Asn Cys Gly Cys Gly Thr Val Asn Trp Arg Ser Cys Thr Cys
65 70 75 80

Asn Ser Gly Lys Thr Val Lys Lys Tyr His Glu Val Leu Gln Phe Glu
85 90 95

Pro Gly His Ile Lys Arg Arg Gly Arg Ala Lys Thr Met Ala Leu Val
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 Ser Ser Asn Lys Glu Gln Asn Gly Val Gln Asp Pro Gln His Glu Arg
 35 40 45
 Ile Ile Thr Val Ser Thr Asn Gly Ser Ile His Ser Pro Arg Phe Pro
 50 55 60
 His Thr Tyr Pro Arg Asn Thr Val Leu Val Trp Arg Leu Val Ala Val
 65 70 75 80
 Glu Glu Asn Val Trp Ile Gln Leu Thr Phe Asp Glu Arg Phe Gly Leu
 85 90 95
 Glu Asp Pro Glu Asp Asp Ile Cys Lys Tyr Asp Phe Val Glu Val Glu

002160" 03/29/96

002160-091200

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| Val Pro Gly Lys Gln Ile Ser Lys Gly Asn Gln Ile Arg Ile Arg Phe | | |
| 130 | 135 | 140 |
| Val Ser Asp Glu Tyr Phe Pro Ser Glu Pro Gly Phe Cys Ile His Tyr | | |
| 145 | 150 | 155 |
| Asn Ile Val Met Pro Gln Phe Thr Glu Ala Val Ser Pro Ser Val Leu | | |
| 165 | 170 | 175 |
| Pro Pro Ser Ala Leu Pro Leu Asp Leu Leu Asn Asn Ala Ile Thr Ala | | |
| 180 | 185 | 190 |
| Phe Ser Thr Leu Glu Asp Leu Ile Arg Tyr Leu Glu Pro Glu Arg Trp | | |
| 195 | 200 | 205 |
| Gln Leu Asp Leu Glu Asp Leu Tyr Arg Pro Thr Trp Gln Leu Leu Gly | | |
| 210 | 215 | 220 |
| Lys Ala Phe Val Phe Gly Arg Lys Ser Arg Val Val Asp Leu Asn Leu | | |
| 225 | 230 | 235 |
| Leu Thr Glu Glu Val Arg Leu Tyr Ser Cys Thr Pro Arg Asn Phe Ser | | |
| 245 | 250 | 255 |
| Val Ser Ile Arg Glu Glu Leu Lys Arg Thr Asp Thr Ile Phe Trp Pro | | |
| 260 | 265 | 270 |
| Gly Cys Leu Leu Val Lys Arg Cys Gly Gly Asn Cys Ala Cys Cys Leu | | |
| 275 | 280 | 285 |
| His Asn Cys Asn Glu Cys Gln Cys Val Pro Ser Lys Val Thr Lys Lys | | |
| 290 | 295 | 300 |
| Tyr His Glu Val Leu Gln Leu Arg Pro Lys Thr Gly Val Arg Gly Leu | | |
| 305 | 310 | 315 |
| His Lys Ser Leu Thr Asp Val Ala Leu Glu His His Glu Glu Cys Asp | | |
| 325 | 330 | 335 |
| Cys Val Cys Arg Gly Ser Thr Gly Gly | | |
| 340 | 345 | |